

REMARKS

This responds to the Office Action mailed on October 18, 2006.

No amendments, cancellations, or additions are made to the claims. As a result, claims 1-23 are now pending in this application.

For the convenience of the Examiner, Applicants' remarks concerning the claims will be presented in the same order in which the Examiner presented them in the Office Action.

Rejection of Claims 1-4, 6-12, 14, 16, 19, and 23 under 35 U.S.C. §103(a) as Unpatentable over Moran

Claims 1-4, 6-12, 14, 16, 19, and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Moran et al. (U.S. 5,359,713). Since a *prima facie* case of obviousness has not been established as required by M.P.E.P. §2142, the Applicant respectfully traverses this rejection.

The Examiner has the burden under 35 U.S.C. §103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). The M.P.E.P. contains explicit direction to the Examiner in accordance with the *In re Fine* court:

In order for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* §2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which indicates that the motivation must be supported by evidence in the record.

Moran Fails to Disclose All Claim Limitations

First, with respect to independent claims 1, 9, 14, and 19, it is admitted in the Office Action that Moran “does not specifically mention that recording an address of a write operation should be done prior to executing an operating system cache driver.”¹ The Office goes on to assert that

“it would have been obvious ... that this happens every time the computer 120 is booted or reset, because Moran explicitly states that one way of keeping track of access transactions (i.e., modifying data via writes, reads and erases) is by using an access transaction log. Note column 6, line 66, to column 7, line 14. By using such a log, the transactions and the addresses at which they occur are detected and recorded continuously at the time they occur so that if the system is later interrupted, reset or rebooted, and the boot drivers are initiated (including the cache drivers), such records in the log would have been made prior to boot, or else there would be no purpose to having such logs.”²

In that portion of the background of Moran referred to by the Examiner, an example is provided of the use of a transaction log to provide data integrity in the event of a computer crash.

However, as the Office admits, Moran does not explicitly teach the mode of operation claimed by the Applicants. Therefore, the Office must either rely on inherency to reach this conclusion, or the Examiner is using personal knowledge.

If the Office relies on inherency, then, as recited in MPEP §2112, “... the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art,” citing *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

No such basis has been provided. Indeed, there is no technical reason why cache drivers should be updated as part of the transaction process. For example, the assertion by the Office contradicts Moran’s own specification, which teaches that cache functionality is specifically excluded from such operations:

¹ Para. 7, Office Action dated October 18, 2006.

² *ibid.*

“While these methods [of transaction support] provide for enhanced recovery after a crash, they do not function as a cache and may require special operations to use the non-volatile memory ... A means for enhancing the performance of accesses to secondary memory which includes the speed performance of main memory cache and the protection of synchronous writes against crashes is currently not available.”³

This is the same problem noted in the Background section of the Applicants’ specification.

Since no inherent reason exists within Moran for recording addresses of write operations prior to executing an operating system cache driver, the Examiner appears to be using personal knowledge. The Examiner is thus respectfully requested to submit an affidavit as required by 37 C.F.R. §1.104(d)(2). Otherwise, the only remaining conclusion is that Moran does not operate as claimed by the Applicants.

Lee, Heemels, and the PC Guide references also fail in this respect. Therefore, no combination of Moran, Lee, Heemels, and/or the PC Guide references can provide recording write operation addresses prior to “executing an operating system cache driver”, as claimed by the Applicants in independent claims 1, 9, 14, and 19, and a *prima facie* case of obviousness has not been established.

Rejection of Claims 5, 17-18, and 20 under 35 U.S.C. §103(a)
as Unpatentable over Moran in View of Lee

Claims 5, 17-18, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Moran et al. in view of Lee et al. (U.S. 5,937,433).

Claims 5, 17-18, and 20 are dependent upon independent claims 1, 14, and 19, which are asserted to be patentable over Moran for the reasons set forth above. Lee does not disclose those elements of independent claims 1, 14, and 19 that Moran fails to disclose.

³ Col. 7, lines 20-45, Moran.

**Rejection of Claim 12 under 35 U.S.C. §103(a)
as Unpatentable over Moran in View of Heemels**

Claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Moran et al. in view of Heemels (U.S. 5,603,331).

Claim 12 is dependent upon independent claim 9, which is asserted to be patentable over Moran for the reasons set forth above. Heemels does not disclose those elements of independent claim 9 that Moran fails to disclose.

**Rejection of Claim 15 under 35 U.S.C. §103(a)
as Unpatentable over Moran in View of “PC Guide”**

Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over Moran et al. in view of PC Guide (Logical Block Addressing).

Claim 15 is dependent upon independent claim 14, which is asserted to be patentable over Moran for the reasons set forth above. PC Guide (Logical Block Addressing) does not disclose those elements of independent claim 14 that Moran fails to disclose.

**Rejection of Claim 22 under 35 U.S.C. §103(a)
as Unpatentable over Moran and Lee and Further in View of “PC Guide”**

Claim 22 was rejected under 35 U.S.C. §103(a) as being unpatentable over Moran et al. and Lee et al., and further in view of PC Guide (BIOS Functions and Operations).

Claim 22 is dependent upon independent claim 19, which is asserted to be patentable over Moran for the reasons set forth above. Neither Lee nor PC Guide (BIOS Functions and Operations) disclose those elements of independent claim 19 that Moran fails to disclose.

Summary of Applicants’ Argument

In summary, none of the references teach recording write operation addresses prior to “executing an operating system cache driver”, as set forth in independent claims 1, 9, 14, and 19. No evidence has been entered in the record to support the Examiner’s assertion that this limitation is shown by the art of record. The requirements of *M.P.E.P.* §2142 have not been satisfied, and a *prima facie* case of obviousness has not been established with respect to these

independent claims. All dependent claims are also nonobvious, since claims depending from nonobvious independent claims are also nonobvious. It is therefore respectfully requested that the rejections of claims 1-23 under 35 U.S.C. §103 be reconsidered and withdrawn.

Allowable Subject Matter

Claim 13 was objected to as being dependent upon a rejected base claim, but it was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In view of Applicants' preceding remarks concerning the asserted patentability of independent claim 9, Applicants do not wish to rewrite claim 13 in independent form at this time, but Applicants respectfully reserve the right to do so at a later time.

Additional Elements and Limitations

Applicants consider additional elements and limitations of the claims to further distinguish over the cited references, and Applicants reserve the right to present arguments to this effect at a later date.

Conclusion

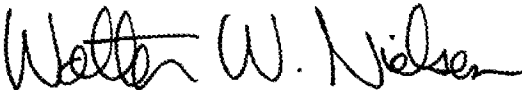
Applicants respectfully submit that claims 1-23 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney, Ann M. McCrackin (located in Minneapolis, Minnesota) at (612) 349-9592 or Applicants' below-signed attorney (located in Phoenix, Arizona) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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